

# Fact Sheet



## *For Draft/Proposed Permitting Action Under 45CSR30 and Title V of the Clean Air Act*

Permit Number: **R30-05100113-2010**  
Application Received: **February 12, 2009**  
Plant Identification Number: **051-00113**  
Permittee: **CertainTeed Gypsum WV, Inc.**  
Mailing Address: **7200 Energy Road, Proctor, WV 26055**

---

Physical Location: Moundsville, Marshall County, West Virginia  
UTM Coordinates: 516 km Easting • 4,408 km Northing • Zone 17  
Directions: The plant is located approximately 5 miles south of Moundsville on State Highway 2.

---

### **Facility Description**

This is a gypsum wallboard forming facility. SIC code – 3275. Operations of the gypsum wallboard forming facility consist of receiving raw materials (primarily synthetic gypsum with some natural gypsum and additives), drying, grinding, and calcining the gypsum, followed by mixing with wet and dry additives to form slurry. The slurry is placed between two layers of paper to form the wallboard. The wallboard is be dried, cut, and stacked for delivery.

### **Emissions Summary**

Plantwide Emissions Summary [Tons per Year]	
Regulated Pollutants	Potential Emissions
Carbon Monoxide (CO)	171.2
Nitrogen Oxides (NO <sub>x</sub> )	103.9
Particulate Matter (PM <sub>2.5</sub> )	87.5
Particulate Matter (PM <sub>10</sub> )	123.1

Total Particulate Matter (PM)	164.1
Sulfur Dioxide (SO <sub>2</sub> )	0.7
Volatile Organic Compounds (VOC)	79.0
<i>PM<sub>10</sub> is a component of TSP.</i>	
<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>
Total	3.1
<i>Some of the above HAPs may be counted as PM or VOCs. Total HAP is much less than 10.0 tons/yr.</i>	

Note: The Company started operating in 2008 and has not submitted a CES yet.

### Title V Program Applicability Basis

This facility has the potential to emit 171.2 tons/yr of CO, 103.9 tons/yr of NO<sub>x</sub>, 123.1 tons/yr of PM<sub>10</sub>. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, CertainTeed Gypsum WV, Inc is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	To Prevent and Control Particulate Matter
	45CSR10	To Prevent and Control Sulfur Oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permit for Construction
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	40 C.F.R. Part 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants.
	40 C.F.R. Part 60, Subpart UUU	Standards of Performance for Calciners and Dryers in Mineral Industries.
	40 C.F.R. Part 61	Asbestos inspection and removal
State Only:	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-2656B	November 20, 2009	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B" which may be downloaded from DAQ's website.

### Determinations and Justifications

Explanation of Zones 1, 2 & 3 in Section 4.1.1:

The dryer has three zones or heating chambers, each with two air circulating fans. The first two zones are able to operate at a high temperature because of the high water content of the board at this stage and are where a major part of the water in the core is evaporated. The first zone is designed so that it circulates heated air in a counter flow or reverse direction to the board movement. This gives the board an opportunity to warm up as it enters the dryer before it is exposed to the high temperatures where the hot air enters. This allows the water in the core of the board to migrate to the outside and pass through the paper as steam without disturbing the paper to core bond.

The third zone is much longer than the first and second and does the final drying. This zone operates at a lower temperature and is carefully controlled to dry the board to the proper free moisture level without exposing the board core to high temperatures after most of the water has been removed. High temperatures would calcine the gypsum crystals at the paper interface weakening them and causing failure of the paper to core board.

#### 45CSR7

Pursuant to 45CSR7, Section 3.1, no person shall cause, suffer, allow, or permit emissions of smoke and/or particulate matter into the open air from any process source operation greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. Proper maintenance and operation of the baghouses and enclosures (along with the use of only natural gas in the combustion units) should keep the opacity of the units far below 20%.

Pursuant to 45CSR7 Section 4.1, no person shall cause, suffer, allow, or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A. Since permit limits in section 4.1.1 for the applicable sources are more stringent than rule 7, compliance with permit limits in section 4.1.1 ensures compliance with 45CSR7; hence 45CSR7Section 4.1 citation is included in Section 4.1.1 citations.

Pursuant to 45CSR7 Section 5.1, no person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable. CertainTeed will meet this requirement through a system of enclosures and baghouses.

Pursuant to 45CSR7 Section 5.2, the owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. CertainTeed will meet this requirement by paving all haulroads.

40 C.F.R. Part 60, Subpart OOO (Note: Some of the following is from R13-2656 factsheet)

This facility is subject to the rule because gypsum is included in the list of nonmetallic minerals covered by the rule. According to R13-2656 factsheet, the facility should have no problem meeting the requirements of 40 CFR 60 Subpart OOO; the proposed permit emission limits for the baghouses in R13-2656 are generally less than half the OOO allowable limit.

The following sources are subject to 40 C.F.R. 60 Subpart OOO:

Emission Unit ID	Emission Unit Name	Emission Point ID
EU05	Cage Mill DSG Dryer	FF05 (EP05)
EU06	Cage Mill Feed Silo	FF06 (EP06)
EU07	DSG Conveying Equipment	FF07 (EP07)
EU08	#1 Intermediate DSG Silo	FF08 (EP08)
EU16	HRA Landplaster Bin	FF16 (EP16)
EU18	HRA Ball Mill System	FF18 (EP18)

The permittee's Title V application stated that 40 C.F.R 60 Subpart OOO is applicable to EU44, 47 and 48. During the review process, the permittee provided an EPA determination that 40 C.F.R 60 Subpart OOO is not applicable to EU44, 47 and 48 because they are screw conveyors.

40 C.F.R. 60 Subpart OOO was revised on April 28, 2009. R13-2656A issued on May 8, 2009 and subsequently R13-2656B issued on November 20, 2009 contain outdated 40 C.F.R. 60 Subpart OOO language. In this Title V permit, the revised 40 C.F.R. 60 Subpart OOO requirements have been included.

All the emission points subject to 40 C.F.R. 60 Subpart OOO have been constructed before April 22, 2008; hence sections of 40 C.F.R. 60 Subpart OOO applicable to affected facilities that commenced construction on or after April 22, 2008 are not applicable. There are no wet scrubbers. Initial testing has been performed for all the emission points subject to 40 C.F.R. 60 Subpart OOO, hence initial performance testing requirements in Table 2 and 3 of 40 C.F.R. 60 Subpart OOO are not included. Repeat performance testing in Table 3 for fugitive emission is not applicable because all the emission points subject to 40 C.F.R. 60 Subpart OOO have been constructed before April 22, 2008

40 C.F.R. Part 60, Subpart UUU (Note: The following is from R13-2656 factsheet)

This facility is subject to the rule because gypsum processing is included in the definition of mineral processing plants.

Although the facility (CertainTeed) will utilize two “dryers” (the Cage Mill Flash Drying System and the Board Dryer) they are not subject to 40 C.F.R. Part 60, Subpart UUU. The Cage Mill system does dry gypsum but it also crushes and grinds gypsum. Therefore, the facility has agreed that the unit should be regulated under the more stringent 40 C.F.R. Part 60, Subpart OOO. The Board Dryer is not subject to 40 C.F.R. Part 60, Subpart UUU because it is part of the wallboard production operations not the mineral processing operations. Additionally, the facility has stated that the Board Dryer is a “tunnel dryer” which is specifically exempted from Subpart UUU. Therefore the only units at the facility which will be subject to Subpart UUU are the calciners.

The following sources are subject to 40 C.F.R. 60 Subpart UUU:

Emission Unit ID	Emission Unit Name	Emission Point ID
EU12	#1 Kettle	FF12
EU13	#2 Kettle	FF13

Opacity from all stacks is limited to 10% unless the stack is from a wet scrubber. However, CertainTeed will not utilize any wet scrubbers.

It should be noted that 40 C.F.R. §60.734(c) exempts the gypsum flash calciners from the monitoring requirements of 40 C.F.R. §60.734.

Calciners are exempt from 40 C.F.R. §60.735 because they are exempted from 40 C.F.R. §60.734 and they do not use wet scrubbers.

CertainTeed has proposed PM emission limits from the calciners of approximately 1/3 the 40 C.F.R. 60 Subpart UUU allowable levels. Therefore the facility should have no problem meeting the requirements of 40 C.F.R. 60 Subpart UUU.

Emission points were tested for compliance in the week of August 25, 2008. Following are the results of some of the tests:

Source	Pollutant	Testing Result	Unit	Permit limit (new limit - R13-2656A)	% of limits	Testing Frequency	Next Testing due
--------	-----------	----------------	------	--------------------------------------	-------------	-------------------	------------------

EU13	NOx	4.5	lb/hr	6.8	66	Once/3years	8/25/2011
	CO	3.61	lb/hr	6.06	60	Once/3years	8/25/2011
EU36 <sup>1</sup>	PM10	1.16	lb/hr	2.15	54	Once/3years	8/25/2011
	NOx	3.5	lb/hr	4.65	75	Once/3years	8/25/2011
	CO	7.43	lb/hr	13.9	53	Once/3years	8/25/2011
EU36 <sup>2</sup>	PM10	0.61	lb/hr	1.37	45	Once/5years	8/25/2013
	NOx	0.27	lb/hr	3.01	9	Once/5years	8/25/2013
	CO	1.12	lb/hr	10.4	11	Once/5years	8/25/2013

Note: All other sources and pollutants required to be tested by this permit were less than 50% of the permit limit, hence they shall be tested by August 25, 2013.

Note: <sup>1</sup> Zones 1 & 2, <sup>2</sup> Zone 3

EU36, being one source, will be due for testing (for all 3 zones) by August 25, 2011.

When R13-2656A was issued on May 8, 2009, PM<sub>10</sub> limits for certain emission points were changed from PM<sub>10</sub> to PM<sub>2.5</sub> (since Marshall County is nonattainment for PM<sub>2.5</sub>). Also there are testing requirements to show compliance with PM<sub>2.5</sub> limits for certain emission points. According to 45CSR13 permit writer, the permit writer intended for permittee to begin the PM<sub>2.5</sub> testing with their next periodic test, not to make them go back and redo their initial test again (Initial test for PM<sub>10</sub> was performed in the week starting on August 25, 2008).

In R13-2656B the emission unit list provided in Condition 1.0 assigned emission point EP40 to the material handling operations (emission unit EU40); however, EU40 is a fugitive source. Title V permit list EU40 as a fugitive source.

45 CSR 10-4.1.e. exempts manufacturing source operations with a potential to emit less than 500 lbs/yr of sulfur oxides from the 45 CSR 10-4.1 limit. Except for EU36, all other emission points has potential to emit less than 500 lbs/yr of sulfur dioxide.; therefore, 45 CSR 10-4.1 apply only to EU36.

## Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

### 45CSR10

Since all combustion sources within the facility burn only pipeline quality natural gas, according to 45CSR§10-10.3 the combustion sources are exempt from 45CSR§10-8 (testing, monitoring, recordkeeping and reporting).

### 40CFR64

None of the pollutant-specific emissions units have the potential to emit (taking into account control devices to the extent appropriate under the definition of this term in 40 C.F.R. §64.1) the applicable regulated air pollutant in an amount equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, hence none of the PSEU's (*Pollutant-specific emissions units*) are *Large pollutant-specific emissions units*; hence according to 40 C.F.R. § 64.5 (b) the permittee has to submit a CAM plan or justify why CAM plan is not applicable when this initial permit is **renewed**.

### 45CSR2

Since, the DSG cage mill system, kettles, paper heaters, and board dryer are all direct heat transfer units, these units are not subject to 45CSR2 as they are not classified as fuel burning units. In addition, the stucco cooler does not meet the definition of a fuel burning unit since there is no combustion associated with it.

### **Request for Variances or Alternatives**

None

### **Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

### **Comment Period**

Beginning Date: December 18, 2009  
Ending Date: January 19, 2010

All written comments should be addressed to the following individual and office:

U.K.Bachhawat  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

### **Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

### **Point of Contact**

U.K.Bachhawat  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1256 • Fax: 304/926-0478

### **Response to Comments (Statement of Basis)**

(Choose) Not applicable.

**OR**

Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.